

WHAT IS CLAIMED IS:

1. A liquid crystal display device comprising a first substrate, a second substrate, and a vertical alignment type liquid crystal layer including liquid crystal molecules having negative dielectric anisotropy disposed between the first substrate and the second substrate,

the device having a plurality of picture-element regions each defined by a first electrode placed in the first substrate on the side facing the liquid crystal layer and a second electrode placed in the second substrate to oppose to the first electrode via the liquid crystal layer,

in each of the plurality of picture-element regions, the liquid crystal layer having a plurality of liquid crystal regions different in the direction in which liquid crystal molecules tilt when a voltage is applied between the first electrode and the second electrode,

wherein at least one of the first substrate and the second substrate has a light-shield layer overlapping at least part of boundary region defined as regions separating the plurality of liquid crystal regions from each other, and

the at least part of boundary region overlapping the light-shield layer is a region permitting liquid crystal molecules surrounding the region to tilt so that ends of the liquid crystal molecules closer to the substrate having the light-shield layer go away from the region when a voltage is applied between the first electrode and the second electrode.

2. The liquid crystal display device of claim 1, wherein the light-shield layer is placed with a predetermined spacing from the liquid crystal layer.

3. The liquid crystal display device of claim 1, further comprising a pair of polarizing plates placed opposing to each other via the liquid crystal layer so that their polarization axes are substantially perpendicular to each other,

wherein in each of the plurality of picture-element regions, at least one of the first substrate and the second substrate has an additional light-shield layer overlapping at least part of regions in which liquid crystal molecules tilt in directions substantially parallel to the polarization axes of the pair of polarizing plates when a

voltage is applied between the first electrode and the second electrode.

4. The liquid crystal display device of claim 1, wherein at least one of the first substrate and the second substrate has at least one protrusion having a slant side formed on the surface facing the liquid crystal layer, and the direction in which liquid crystal molecules tilt in each of the plurality of liquid crystal regions is defined by orientation-regulating force of the at least one protrusion.

5. The liquid crystal display device of claim 1, wherein at least one of the first electrode and the second electrode has at least one opening, and the direction in which liquid crystal molecules tilt in each of the plurality of liquid crystal regions is defined by an inclined electric field generated at an edge portion of the at least one opening when a voltage is applied between the first electrode and the second electrode.

6. The liquid crystal display device of claim 1, wherein at least one of the first substrate and the second

substrate has at least one protrusion having a slant side formed on the surface facing the liquid crystal layer,

at least one of the first electrode and the second electrode has at least one opening, and

the direction in which liquid crystal molecules tilt in each of the plurality of liquid crystal regions is defined by orientation-regulating force of the at least one protrusion and an inclined electric field generated at an edge portion of the at least one opening when a voltage is applied between the first electrode and the second electrode.

7. The liquid crystal display device of claim 1, wherein the first substrate further includes switching elements respectively placed to correspond to the plurality of picture-element regions, and

the first electrode comprises a plurality of picture-element electrodes respectively placed for the plurality of picture-element regions and switched with the switching elements, and the second electrode comprises at least one counter electrode opposed to the plurality of picture-element electrodes.

8. A liquid crystal display device comprising a first substrate, a second substrate, and a vertical alignment type liquid crystal layer including liquid crystal molecules having negative dielectric anisotropy disposed between the first substrate and the second substrate,

the device having a plurality of picture-element regions each defined by a first electrode placed in the first substrate on the side facing the liquid crystal layer and a second electrode placed in the second substrate to oppose to the first electrode via the liquid crystal layer,

in each of the plurality of picture-element regions, the liquid crystal layer having a plurality of liquid crystal regions different in the direction in which liquid crystal molecules tilt when a voltage is applied between the first electrode and the second electrode,

the plurality of liquid crystal regions of the liquid crystal layer including a first liquid crystal region of which the retardation value for light incident on the liquid crystal layer obliquely from the normal to the liquid crystal layer increases with rise of an applied voltage and a second liquid crystal region of which the retardation value first decreases and then increases,

wherein the device comprises a light-shield layer selectively shading the first liquid crystal region when the device is observed in a direction oblique from the normal to the display plane.

9. The liquid crystal display device of claim 8, further comprising a pair of polarizing plates placed opposing to each other via the liquid crystal layer so that their polarization axes are substantially perpendicular to each other,

wherein in each of the plurality of picture-element regions, at least one of the first substrate and the second substrate has an additional light-shield layer overlapping at least part of regions in which liquid crystal molecules tilt in directions substantially parallel to the polarization axes of the pair of polarizing plates when a voltage is applied between the first electrode and the second electrode.

10. The liquid crystal display device of claim 8, wherein at least one of the first substrate and the second substrate has at least one protrusion having a slant side formed on the surface facing the liquid crystal layer, and

the direction in which liquid crystal molecules tilt in each of the plurality of liquid crystal regions is defined by orientation-regulating force of the at least one protrusion.

11. The liquid crystal display device of claim 8, wherein at least one of the first electrode and the second electrode has at least one opening, and the direction in which liquid crystal molecules tilt in each of the plurality of liquid crystal regions is defined by an inclined electric field generated at an edge portion of the at least one opening when a voltage is applied between the first electrode and the second electrode.

12. The liquid crystal display device of claim 8, wherein at least one of the first substrate and the second substrate has at least one protrusion having a slant side formed on the surface facing the liquid crystal layer,

at least one of the first electrode and the second electrode has at least one opening, and

the direction in which liquid crystal molecules tilt in each of the plurality of liquid crystal regions is defined by orientation-regulating force of the at least one

protrusion and an inclined electric field generated at an edge portion of the at least one opening when a voltage is applied between the first electrode and the second electrode.

13. The liquid crystal display device of claim 8, wherein the first substrate further includes switching elements respectively placed to correspond to the plurality of picture-element regions, and

the first electrode comprises a plurality of picture-element electrodes respectively placed for the plurality of picture-element regions and switched with the switching elements, and the second electrode comprises at least one counter electrode opposed to the plurality of picture-element electrodes.

14. A liquid crystal display device comprising a first substrate, a second substrate, a vertical alignment type liquid crystal layer including liquid crystal molecules having negative dielectric anisotropy disposed between the first substrate and the second substrate, and a pair of polarizing plates placed opposing to each other via the liquid crystal layer so that their polarization

axes are substantially perpendicular to each other,

the device having a plurality of picture-element regions each defined by a first electrode placed in the first substrate on the side facing the liquid crystal layer and a second electrode placed in the second substrate to oppose to the first electrode via the liquid crystal layer,

in each of the plurality of picture-element regions, the liquid crystal layer having a plurality of liquid crystal regions different in the direction in which the liquid crystal molecules tilt when a voltage is applied between the first electrode and the second electrode,

wherein in each of the plurality of picture-element regions, at least one of the first substrate and the second substrate has a light-shield layer overlapping at least part of regions in which liquid crystal molecules tilt in directions substantially parallel to the polarization axes of the pair of polarizing plates when a voltage is applied between the first electrode and the second electrode.

15. The liquid crystal display device of claim 14, wherein the light-shield layer is placed substantially

right on the liquid crystal layer.

16. The liquid crystal display device of claim 14, wherein at least one of the first substrate and the second substrate has at least one protrusion having a slant side formed on the surface facing the liquid crystal layer, and the direction in which liquid crystal molecules tilt in each of the plurality of liquid crystal regions is defined by orientation-regulating force of the at least one protrusion.

17. The liquid crystal display device of claim 14, wherein at least one of the first electrode and the second electrode has at least one opening, and the direction in which liquid crystal molecules tilt in each of the plurality of liquid crystal regions is defined by an inclined electric field generated at an edge portion of the at least one opening when a voltage is applied between the first electrode and the second electrode.

18. The liquid crystal display device of claim 14, wherein at least one of the first substrate and the second substrate has at least one protrusion having a slant side

formed on the surface facing the liquid crystal layer,

at least one of the first electrode and the second electrode has at least one opening, and

the direction in which liquid crystal molecules tilt in each of the plurality of liquid crystal regions is defined by orientation-regulating force of the at least one protrusion and an inclined electric field generated at an edge portion of the at least one opening when a voltage is applied between the first electrode and the second electrode.

19. The liquid crystal display device of claim 14, wherein the first substrate further includes switching elements respectively placed to correspond to the plurality of picture-element regions, and

the first electrode comprises a plurality of picture-element electrodes respectively placed for the plurality of picture-element regions and switched with the switching elements, and the second electrode comprises at least one counter electrode opposed to the plurality of picture-element electrodes.